



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

RBW6522A00231-W142AJ-

3T

Job Sheet 199130



Part No: RBW6522A00231-W142AJ-3T **Job Qty:** 3 pcs

Part Name: Tail Rotor Gear Box/Servo Actuator Oil Seal Fit/Extracting Tool



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 8/13/19

Job Tracking No:

Due Date: 10/7/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG RBW6522A00231-W142AJ-3T Rev 5 IPP Rev A 18.02.08 New issue DP Verify DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier Lead Time	
92	Purchasing	3 pcs	10/7/19		0.00	0.00	Purchasing - 1	SEP 27 2019
							Purchasing - 2	
							Purchasing - 3	
94	Packaging 2-1 - Receive - B4B	3 pcs	10/7/19		0.00	0.00	Packaging 2 - 1 - B4B	
							Packaging 2 - 2 - B4B	
							Packaging 2 - 3 - B4B	
							Packaging 2 - 5 - B4B	
							Packaging 2 - 4 - B4B	
							Packaging 2 - 6 - B4B	
							Packaging 2 - 7 - B4B	
							Packaging 2 - 8 - B4B	
							Packaging 2 - 9 - B4B	
							Packaging 2 - 10 - B4B	
							Packaging 2 - 11 - B4B	
							Packaging 2 - 12 - B4B	
							Packaging 2 - 13 - B4B	SEP 27 2019
							Packaging 2 - 14 - B4B	
							Packaging 2 - 15 - B4B	
							Packaging 2 - 16 - B4B	
							Packaging 2 - 17 - B4B	
							Packaging 2 - 18 - B4B	
							Packaging 2 - 19 - B4B	
							Packaging 2 - 20 - B4B	
							Packaging 2 - 21 - B4B	
							Packaging 2 - 22 - B4B	
							Packaging 2 - 23 - B4B	
							Packaging 2 - 24 - B4B	
							Packaging 2 - 25 - B4B	
							Packaging 2 - 26 - B4B	
							Packaging 2 - 27 - B4B	
							Packaging 2 - 28 - B4B	



Container No: S217982

Part: RBW6522A00231 – W142AJ – 3T
Job No: 199130
Serial No/Batch: S217982
Revision: 5
Inspector:
Exp Date:
Instructions:

Dart Aerospace Ltd.
1270 Aberdeen Street
Newkasbury, ON K64 1K7
CANADA
TEL.: 1 613 632 – 5200
Email: sales @ dartaero.com
www.dartaerospace.com

Date: 09/27/19



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
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Container No: S217982



Part: RBW6522A00231-W142AJ-3T

Job No: 199130

Serial No/Batch: S217982

Revision: 5

Inspector:

Exp Date:

Instructions:

Date: 09/27/19

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					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
					QC 6 - 9	
					QC 6 - 68	DAS
96	QC 6	3 pcs	10/7/19	0.00 0.00	QC 6 - 61	61
					QC 6 - 40	9-89
					QC 6 - 81	
					Small Fab - 1 - B4B	
					Small Fab - 2 - B4B	HL
100	Small Fab - 2 - B4B	3 pcs	10/7/19	0.00 1.50	Small Fab - 3 - B4B	
					Small Fab - 4 - B4B	
					Small Fab - 5 - B4B	
					Small Fab - 6 - B4B	
					Small Fab - 7 - B4B	
					Small Fab - 8 - B4B	
					QC 5 - 10	
					QC 5 - 12	
110	QC 5	3 pcs	10/7/19	0.00 0.00	QC 5 - 17	
					QC 5 - 18	
					QC 5 - 19	
					QC 5 - 22	
					QC 5 - 24	
					QC 5 - 3	
					QC 5 - 43	
					QC 5 - 49	
					QC 5 - 51	
					QC 5 - 58	
					QC 5 - 68	
					QC 5 - 9	
					QC 5 - 50	
					QC 5 - 30	
					QC 5 - 40	DAS
					QC 5 - 61	40
					QC 5 - 81	9-89
130	Packaging 3-1 - Stock - B4B	3 pcs	10/7/19	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	DAS
					Packaging 3 - 6 - B4B	28
					Packaging 3 - 7 - B4B	9-89
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	

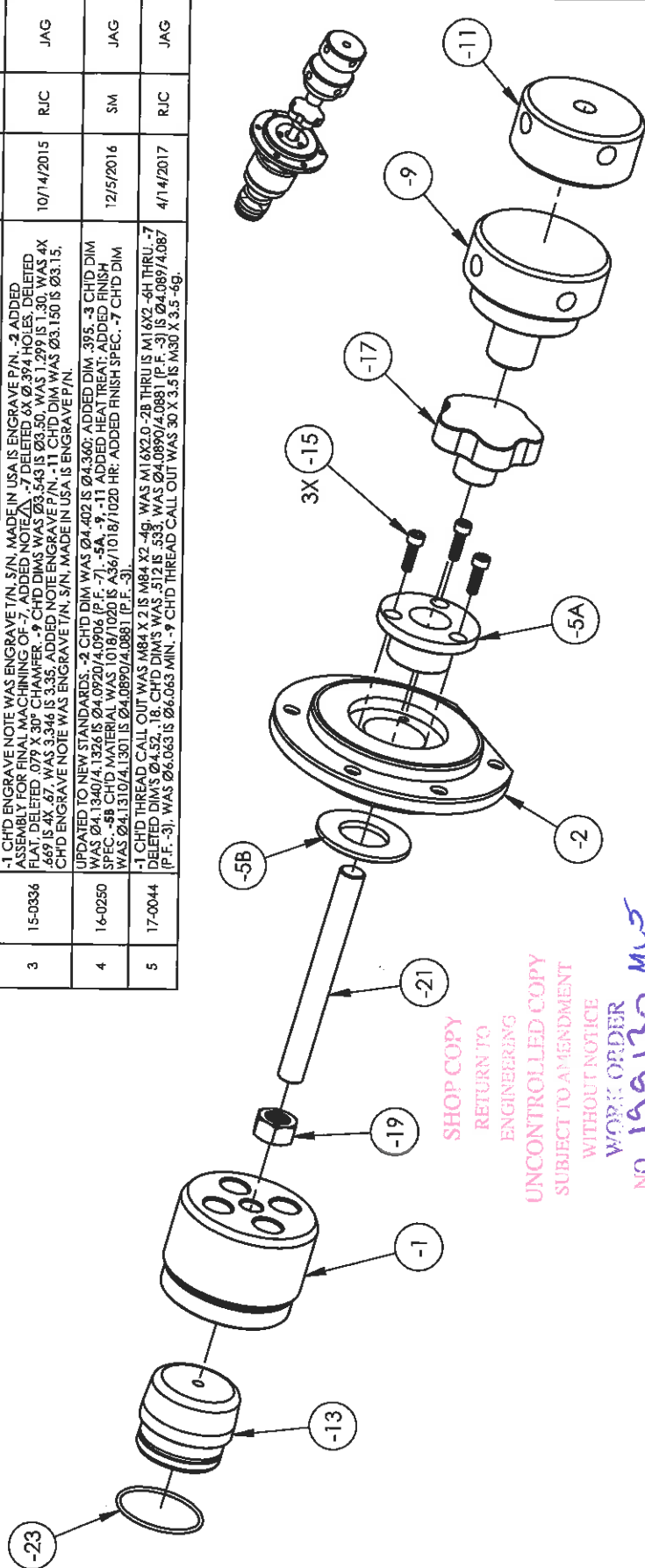
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				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140	QC 21 - FG	3 pcs	10/7/19	0.00 0.00	QC 21 - FG - 21
					QC 21 - FG - 70
					QC 21 - SA - 53
Part Op 92 - (Purchasing) 1- Issue P/O to Arrow Tech Machine Works P/O # <u>18044262</u> 2- Manufacture RBW6522A00231- Descriptions: W142AJ-3T as per DWG 3- Certificate of conformity is required 94 - (Receive & Inspect for Damage & Mat'l Certs) 96 - (QC6- All purchased or subcontracted products) 100 - (Small Fab) Assemble as per DWG. 110 - (QC5- Inspect part completeness to step on W/O) 130 - (Identify as per dwg & Stock Location: _____) Identify and Stock 140 - (QC21- Final Inspection - Work Order Release) x 3 <i>Plus</i> <i>aug 14.2019</i>					
Job BOM					
Part / Item	Component Name	Quantity	Operation	Container	
RBW6522A00231-W142AJ-3TP	Tail Rotor Gear Box/Servo Actuator Oil Seal Fit/Extracting Tool	3 Ea (1 ea)	92- Purchasing	5217974	
Job Allocations					
Operation	Component Part	Required	Inventory	Allocated	
92-Purchasing	RBW6522A00231-W142AJ-3TP	3	0	0	
Part Specifications					
Specifications could not be found.					

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REVISIONS			REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
REV	ECR	DESCRIPTION						
1		-1 CHD DIM WAS M16 X 1 IS M16 X 2, ADDED MISSING DIM B.C. Ø1.929, -5A CHD DIM WAS Ø2.5215-2.5208 IS Ø2.5185 +.000-.005, WAS Ø1.5764-1.5758 IS Ø1.5730-1.5724, -7 ADDED MISSING HOLE DIM 6X Ø.394 AND CHAMFER .03 X 45°, CHD DIM WAS Ø6.063 IS Ø6.063.	1			9/28/2012	RJC	SE
2	15-0172	-5A CHD DIM WAS M6 X 1 433 ±.236 (3X) IS 3X Ø.252 THRU 43 ±.24.	2			7/17/2015	RJC	JAG
3	15-0336	-1 CHD ENGRAVE NOTE WAS ENGRAVE T/N 5/N, MADE IN USA IS ENGRAVE P/N. -2 ADDED ASSEMBLY FOR FINAL MACHINING OF 7, ADDED NOTE DELETED Ø.394 HOLES, DELETED FLAT, DELETED .079 X 30° CHAMFER, -9 CHD DIMS WAS Ø3.30, -10 CHD DIM WAS Ø3.30, -11 CHD DIM WAS Ø3.30, -12 CHD DIM WAS Ø3.30, -13 CHD DIM WAS Ø3.30, -14 CHD DIM WAS Ø3.30, -15 CHD DIM WAS Ø3.30, -16 CHD DIM WAS Ø3.30, -17 CHD DIM WAS Ø3.30, -18 CHD DIM WAS Ø3.30, -19 CHD DIM WAS Ø3.30, -20 CHD DIM WAS Ø3.30, -21 CHD DIM WAS Ø3.30, -22 CHD DIM WAS Ø3.30, -23 CHD DIM WAS Ø3.30.	3			10/14/2015	RJC	JAG
4	16-0250	UPDATED TO NEW STANDARDS, -2 CHD DIM WAS Ø4.402 IS Ø4.360, ADDED DIM .395, -3 CHD DIM WAS Ø4.1340/4.1326 IS Ø4.0920/4.0906 (P.F. -.5A, -.9, -11 ADDED HEAT TREAT, ADDED FINISH SPEC, -48 CHD MATERIAL WAS 1018/1020 IS A36/1018/1020 HR, ADDED FINISH SPEC, -5A CHD DIM WAS Ø4.1301 IS Ø4.0890/4.0881 (P.F. -.3).	4			12/5/2016	SM	JAG
5	17-0044	-1 CHD THREAD CALL OUT WAS M8 X 2 IS M8 X 2.49, WAS M16X2.0-2B THRU IS M16X2.0-6H THRU, -7 DELETED DIM'S Ø4.52, -18, CHD DIMS WAS .512 IS .533, WAS Ø4.0890/4.0881 (P.F. -.3) IS Ø4.089/4.087 (P.F. -.3), WAS Ø6.063 IS Ø6.063 MIN, -9 CHD THREAD CALL OUT WAS 30 X 3.5 IS M30 X 3.5 -6g.	5			4/14/2017	RJC	JAG



NOTES:
1. RBW6522A00231-W142AJ-3T REPLACES AGUSTA T/N: 3T6522A00231-W142AJ.
2. ALSO IN KIT RBW6505G00231-3T.

TITLE		TGB/SERVO ACTUATOR OIL SEAL FIT/EXTRACTION TOOL		REV	
RBW6522A00231-W142AJ-3T		5		5	
DWG NO.		RBW6522A00231-W142AJ-3T		5	
MATERIAL		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ±.01		1. BREAK ALL SHARP EDGES .015 X 45° OR .015R	
FINISH		.XXX ±.005		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SPEC		.XX ±.01		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY:		PERRITT		USED ON MODEL	
CHECKED:		CLOUGH		AWT/39	
OPPS APPR:		ANDERSON		10/5/2010	
QA APPR:		LINDSAY		DATE	
APPROVED:		GILBERT		1:4	
SCALE		1:4		SHEET 1 OF 10	

ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
		-1	1	RECEIVER	6061		2
X		-2	1	BASE PLATE ASSEMBLY			3
1		-3	1	BASE PLATE	6061		4
		-5A	1	INSERT	4140/4142		5
		-6B	1	COVER	A36/1018/1020 HR		6
1		-7	1	PAD	NYLON		7
		-9	1	LARGE KNOB	4140/4142		8
		-11	1	SMALL KNOB	4140/4142		9
		-13	1	CUP	6061		10
	B/O	-15	3	SOCKET HEAD CAP SCREW	STEEL	M6 X 1 X 20mm [MCMASTER-CARR #91290A324]	1
	B/O	-17	1	5 LOBE KNOB	CAST IRON	M16 X 2.0 X 28mm J.W. WINCO #16NC81/E	1
	B/O	-19	1	HEX NUT	STEEL	M16X2 CLASS 10 [MCMASTER-CARR #90485A120]	1
	B/O	-21	1	STUD	STEEL	M16 X 2 X 150mm [MCMASTER-CARR #93275A062]	1
	B/O	-23	1	O-RING	VITON	Ø2.156, Ø.096 CROSS SEC. CHRISTOPHER SEALS #V75-136	1
ASSY -2							

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐



Job: _____ Part No. _____		DISPOSITION Rework ☐ ☐ ☐ Scrap ☐ ☐ ☐ Use-as-is ☐ ☐ ☐		DEPARTMENT/PROCESS Skid-tube ☐ ☐ ☐ Machining ☐ ☐ ☐ Large Fab ☐ ☐ ☐		Cross tube ☐ ☐ ☐ Small Fab ☐ ☐ ☐ Finishing ☐ ☐ ☐		Eng. (Non-AW) ☐ ☐ ☐ Prod. Eng. Coord. ☐ ☐ ☐ Rec/Store/Packaging ☐ ☐ ☐		Engineering ☐ ☐ ☐ Water Jet ☐ ☐ ☐ Supplier ☐ ☐ ☐ Quality ☐ ☐ ☐		MRB (QS1042) ☐ ☐ ☐	
Date: _____		Sequence #: _____		QTY Affected: _____		Disposition							
Description Work Order Deviation													
Completed By													
Lead hand / Supervisor													
QC / QA Coordinator													

Root Cause Operator ☐ ☐ ☐ Manufacturing Process ☐ ☐ ☐ Equip/Tooling ☐ ☐ ☐ Handling/Preservation ☐ ☐ ☐ Material ☐ ☐ ☐ Product Improvement ☐ ☐ ☐ Process Improvement ☐ ☐ ☐ Human Factors ☐ ☐ ☐				FAULT CATEGORY <table border="1"> <tr> <td>Pressure/Forced</td> <td>Contamination</td> <td>Power Loss/Surge</td> <td>Positioned Wrong</td> </tr> <tr> <td>Bending</td> <td>Misaligned/off center</td> <td>Folio/Program</td> <td>Outside Tolerance</td> </tr> <tr> <td>Crushing</td> <td>BOM/Route</td> <td>Grain Direction</td> <td>Drawing</td> </tr> <tr> <td>Cracks</td> <td>Broken/Damage/Defect</td> <td>Weld</td> <td>Finish</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave/Twist</td> <td>Incomplete/Unclear Instructions</td> <td>Wrong Stock Pulled</td> <td>Part Lost/Missing</td> </tr> <tr> <td>Marks/Chatter</td> <td>Drill Holes</td> <td>Out of Sequence</td> <td>Misread</td> </tr> <tr> <td>Mislabeled</td> <td>Fit/Function</td> <td>Off-set/Set-up</td> <td></td> </tr> </table> Other/Details: _____												Pressure/Forced	Contamination	Power Loss/Surge	Positioned Wrong	Bending	Misaligned/off center	Folio/Program	Outside Tolerance	Crushing	BOM/Route	Grain Direction	Drawing	Cracks	Broken/Damage/Defect	Weld	Finish	Crimp/Kink/Ripple/Wave/Twist	Incomplete/Unclear Instructions	Wrong Stock Pulled	Part Lost/Missing	Marks/Chatter	Drill Holes	Out of Sequence	Misread	Mislabeled	Fit/Function	Off-set/Set-up	
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1270 Aberdeen St
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Tel (613) 632-5200

PURCHASE ORDER

POHB044262



Supplier: ARR002-VU
Arrow Tech Machine Works
29751 E. Enid Road,
Unit C
Eugene, OR 97402 USA
Phone: 541-780-6938
Fax: 458-215-4938

Attention: , Ana
(541) 780-6938

Ship To:

PO No: POHB044262

PO Date: 8/14/19

Due Date: 10/2/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Phone:

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Item No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	199130	RBW6522A00231-W142AJ-3TP			Tail Rotor Gear Box/Servo Actuator Oil Seal Fit/Extracting Tool As Per Dwg RBW6522A00231-W142AJ-3T Rev. 5	Firmed -		10/2/19	3 Ea	0 Ea	3 Ea	\$2,061.26/Ea	\$6,183.78
						X3			SEP 27 2019				DP 61 9-89
2	99131	RBW6522A00231-W142AK-3TP			Tail Rotor Gear Box/Mast Output Oil Seal Assembly Press Tool As Per Dwg RBW6522A00231-W142AK-3T Rev. 1	Firmed -		10/2/19	5 Ea	0 Ea	5 Ea	\$185.00/Ea	\$925.00
						X5			SEP 27 2019				DP
3	199132	RBW6522A00231-W142S-3TP			Tail Rotor Gear Box/Mast Output Oil Seal Assembly Support Tool As Per Dwg RBW6522A00231-W142S-3T Rev. 2	Firmed -		10/2/19	5 Ea	0 Ea	5 Ea	\$195.79/Ea	\$978.95
						X5			SEP 27 2019				DP
												Grand Total:	\$8,087.73



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Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB044262



Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY
A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)
A012 CHEMICAL AND PHYSICAL TEST REPORTS
A016 PERSONNEL QUALIFICATION
A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)
A026 CERTIFICATION OF MATERIAL CONFORMANCE
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

A handwritten signature in black ink, likely belonging to Patrick Lussier, located to the right of the Procurement Quality Clauses list.

Plex 8/14/19 8:36 AM dart.lussier.patrick



ARROW TECH MACHINE WORKS

Certificate of Conformance

Your Purchase Order No: HB044262

Dated: 9/20/2019

Our Order / Job No: AWT-HB044262 A1

Order Qty: 3

Part Name: TRGB/SERVO ACTUATOR OIL SEAL FIT/EXTRACTION TOOL

Part Number RBW6522A00231-W142AJ-3T

Lot Size: N/A

Ship Date: 9/20/2019

We certify that these parts shipped to you are of domestic or international manufacture and conform to all requirements of the Purchase Order. These parts have been manufactured and inspected in accordance with all required specifications, instructions and drawings. Any applicable specifications are listed below:

Drawing Number: RBW6522A00231-W142AJ-3T

Rev: 5

Material Size and Type: -1, -3, -13/6061 ALUM.; -5A, -9, -11/4140 STEEL Q&T; -5B/ 1018 STEEL; -7/ NYLON

Material Specifications: ALUM.: ASTM B221; STEEL: ASTM A108; NYLON: ASTM D5989

Heat Treatment: (-5A,-9,-11/ RC 28-34)

Plating/Finish: BLACK OXIDE: QMSI-6.2.2 B.O. REV-D; BLACK ANODIZE: MIL-A-8625F, TYPE II, CLASS II

Mercury Contamination: The material used to process this order has not come in contact with mercury or mercury bearing instruments.

Date: 9/20/19

Signed: Hemant M. Sahi

PHGE Machine Works LLC dba Arrow Tech Machine Works
29751 E. Enid Rd. Unit C Eugene, Oregon 97402
Main: (541) 780-6938 | Fax: (458) 215-4938
www.atechmachineworks.com

DAS
61
9-89